

PHASE II INVESTIGATION
EKBERG PARK
3800 BALSAM LANE
ROCKFORD, ILLINOIS 61109

PREPARED FOR:
Mr. Glen Ekberg
Circle Boring & Machine
3161 Forest View Road
Rockford, Illinois 61109

PREPARED BY:
Trans Environmental, Ltd.
4722 East Rockton Road, Suite B
Roscoe, Illinois 61073
Job #TE03-144

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Matthew J. Warneke

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- A. Site Location Map
- B. Sample Location Map
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2.0 Scope of Work

The boring locations and depths were selected based on the soil borings from the 1993 CDM Study that had the highest levels of VOC contamination. The 1993 CDM study labeled the samples according to soil borings (SB), whereas the 2003 Trans Investigation labeled the samples according to Geoprobes (GP). The following table provides a comparison between the CDM 1993 study and the Trans Environmental 2003 investigation.

Table 1. Location of Borings

2003 Trans #	GP Depth	1993 CDM \$B#	SB Depth	Location	*Trans PID	* CDM
GP-1	15'	SB7-24	24'	North of Playground	610	627
GP-2	24'	\$87-4	35'	West of Tennis Courts	533	35.7
GP-4	20'	SB7-5	20'	Northeast of Basketball Courts	813	73.2
GP-5	24'	\$87-7	40'	South of Basketball Courts in Alfalfa Field	1,533	82.9
GP-6	16'	SB7-8	45'	South of Basketball Courts in Alfalfa Field		1,019
GP-7	13'	S87-9	45'	South of Basketball Courts in Alfalfa Field	496	357
GP-8	8,	S87-10	5'	South of GP-5 in Affaifa Field	1,168	441
						

^{*} Highest reported PID reading from each probe/boring.

The probes were completed on September 18, 2003. The soil samples were collected with a stainless-steel split-spoon containing a new 1-inch diameter clear plastic MacroCore® tube measuring four feet in length. At each borehole location, the samples were collected continuously to the terminus of the boring. Trans Environmental's geologist determined the placement of the borings and directed the drilling and sampling operations. The soil samples were inspected in the field for odor, discoloration, and classified in accordance with the Unified Soil Classification System (USCS). The results of each inspection were

recorded on the boring and sample log forms. See Attachment C for copies of the boring logs, and See Attachment D for photograph documentation of the Phase II investigation.

3.0 Sample Collection

The soil samples from each of the borings were collected at four-foot intervals to a total depth ranging between 8 to 24 feet below ground surface (bgs). Each sample was collected with a new pair of disposable nitrile gloves. The samples were placed in new sample jars and bags identified with a unique sample identification number, date, and time with a waterproof marker. The split spoon sampling equipment was decontaminated between each boring with a steam cleaner to prevent cross contamination. New MacroCore® sample liners were used at each sampling interval.

The samples were collected from all borings in new Ziploc bags and field screened with a photo ionization detector (PID). The PID, a RAE Systems MiniRae 2000, measures for organic vapors and petroleum hydrocarbons with a 10.6 electron volt lamp. The instrument was calibrated with isobutylene gas prior to use. The samples were allowed to adjust to ambient temperature for 15 minutes prior to field screening. The tip of the PID was inserted into each Ziploc bag and the highest reading was recorded. The following table displays the PID field screening results.

Table 2.0 PID Field Screening Results

Sample #	Location	Depth (feet)	Soil Type	Odor	OVM (ppm)
GP-1		0-4'	Light brown medium grained sand	No	42
	North of playground	* 4'-8'	Gray to brown/tan sandy clay	Fuel	610
		8'-12	Sandy clay with some grave, isolated green stain with solvent odor	Yes	125
		12'-15'	Gray to brown sandy clay with gravel pebbles (isolated gray seams w/fuel odor)	Yes	721
	West of Tennis Courts	0-4'	Brown loam	No	12
		4'-8'	Tan sand-silt mixture w/gravel	No	73
GP-2		8'-12'	Tan sand-silt mixture w/gravel	No	221
J. 1		12'-16'	Greenish-gray sandy silt gravel	Solvent	209
		* 16'-20'	Gray silty clay	Solvent	533
		20'-24'	Brownish gray dense clay	Solvent	438
	Northeast of basketball courts	0-4'	Brown sand silt gravel mlx	No	2
		4'-8'	Light brown sand silt gravel mix	No	3.7
GP-4		8'-12'	Light brown silty sand	No	Q
		12'-16'	Tan silty fine-med sand	Solvent	396
		* 16'-20'	Light brown silty fine-med sand	Solvent	813
	South of basketball courts in alfalfa field	0-4'	Brown sand-silt mixture	No	14
		4-8'	Tan sand-silt mixture	No	8
GP-5		8'-12'	Tan sand-silt mixture	No	8
GP-J		12'-16'	Tan silty fine-medium grained sand	Fuel	263
		16'-20'	Tan silty fine-medium grained sand	Fuel	
		* 20'-24'	Wet greenish-gray sand and gravel	Fuel	1533
	South of basketball courts in alfalfa field	0-4'	Reddish brown slity sand	No	21
25.0		4'-8'	Tan silt-sand mixture	No	11
GP-6		8'-12'	Tan silt-sand mixture w/color change to gray-green	Fuel	702
		* 12'-16'	Brown-tan silt-sand mixture	Slight	687

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		* 12'-16'	Brown-tan silt-sand mixture	Slight	
GP-7	South of basketball courts in alfalfa field	0-4'	Reddish brown silty sand	No	1
		4'-8'	Tan fine to medium grained sand with some gravel	No	0
		* 8'-12'	Tan fine to medium grained sand with some gravel	Fuel	498
GP-8	South of GP-5 in alfalfa field	0-4'	Brown loam	No	2
		* 4'-8'	Brown to light brown silty sand	Fuel	1.168

^{*} Samples submitted for laboratory analysis.

Split laboratory samples were collected from select samples either exhibiting the highest PID readings or from the same sampling interval as the CDM study. Approximately 5 grams of sample were collected with a plastic syringe sampling device and placed into 40 ml vials containing methanol and sodium bisulfate preservatives for analysis of volatile organic compounds (VOCs). Soil samples were also packed into 4-ounce jars (unpreserved) for analysis of percent solids. The samples were labeled and placed into a cooler on ice. A chain-of-custody document was filled out and accompanied the samples during transport. The samples were delivered via courier to Environmental Monitoring & Technologies, Inc. (EMT) located in Monton Grove, illinois for analysis of VOCs.

4.0 Analytical Results

The samples were analyzed using United States Environmental Protection Agency (U.S. EPA) methods 5035/8260B in accordance with SW-846, Third Edition. The analytical data was evaluated with respect to the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 soil remediation objectives for residential properties for the soil component of the groundwater ingestion exposure route (class I groundwater), along with the inhalation and ingestion exposure routes.

Significant concentrations of VOC compounds were detected in the samples. The analytical results were compared to the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 standards. The concentrations of three primary VOC compounds (1,1,1-trichlorethene, cis-1,3-dichloroethene, and tetrachloroethene) were detected at levels above the TACO Tier 1 Soil Remediation Objectives in samples (GP-1, GP-4, GP-5, GP-6, and GP-8). In addition, 25 other VOC compounds were reported with elevated detection timits, which also exceeded the TACO Tier 1 SROs. See Attachment E for a copy of the laboratory report along with a tabular summary showing the TACO cleanup objectives.

5.0 Conclusions

Based on the phase If soll boring investigation of the Ekberg Park property located at 3800 Balsam Lane in Rockford, Illinois, the levels of VOC contaminants exceed the IEPA TACO Tier 1 cleanup objectives (soil component of the groundwater ingestion exposure route — class I). Observable indicators of contamination (discoloration and/or odors) were apparent in the samples from all the borings. Based on the Phase II investigation results, Trans Environmental concludes that the site is impacted by VOC contaminants above the IEPA TACO Tier 1 soil remediation objectives. Based on the concentrations of contaminants and the large tract of land at the subject property, it is Trans Environmental's opinion that land farming would be a remedial option that would be practical and cost-effective for the VOC soil contamination.

6.0 Limitations

The information contained within this report is based on the conditions of the subject property at the time of our investigation. Future activities or operations, which may after the environmental conditions of the subject property, are not addressed in this report.

This Phase II Soil Boring Investigation has been conducted and prepared in accordance with customary methods and practices in the field of environmental science and engineering. Trans Environmental, Ltd. used professional judgment in presenting information and formulating conclusions. Nevertheless, environmental investigations are inherently limited in the sense that information obtained is based on limited research and site investigation.

The information contained in this report is confidential in nature and is exclusively for the use and benefit of Glen and Dean Ekberg. Our scope of work included soil borings and soil sampling/analysis from suspected/confirmed areas of former petroleum storage/distribution. There are no other warranties or representations, either expressed or implied, included or intended in this report.